



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,985	02/21/2002	Hirokazu Tamura	AMY-002.01	6872

25181 7590 05/28/2003

FOLEY HOAG, LLP
PATENT GROUP, WORLD TRADE CENTER WEST
155 SEAPORT BLVD
BOSTON, MA 02110

EXAMINER

TRAN, MAI HUONG C

ART UNIT PAPER NUMBER

2818

DATE MAILED: 05/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/079,985

Applicant(s)

TAMURA ET AL.

Examiner

Mai-Huong Tran

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 64-69 is/are allowed.
- 6) ☒ Claim(s) 1-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restriction

Applicant's election with traverse of Group I (claims 1-69) in Paper No. 6 drawn to a semiconductor device is acknowledged. Accordingly, claims 70-107 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Because Applicant did not distinctly and specifically point out the supposed error in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Applicant has the right to file a divisional application covering the subject matter of the non-elected claims.

The traversal is on the ground(s) that see the election paper. This is not found persuasive because the fields of search for method' and device claims are NOT coextensive and the determinations of patentability of method and device claims are different, that is process limitations and device limitations are given weight differently in determining the patentability of the claimed inventions. Also, the strategies for doing text searching of the device claims and method claims are different. Thus, separate searches are required.

The requirement is still deemed proper and is therefore made **FINAL**.

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U. S. C. § 102 (b) as being anticipated by U.S. Patent No. 6,044,056 to Wilde et al.

Regarding to claim 1, Wilde discloses a MEMS device, the MEMS device comprising a substrate 810 having a surface, an actuable element 160 at least partially formed from the substrate, and an electromagnetic actuator 180 disposed on the substrate for selectively applying a first force to the actuable element to displace the actuable element along a path as set forth in cols. 4-5, and fig. 1.

Regarding to claim 2, Wilde discloses the MEMS device wherein the actuable element has a base 170 and an arm 160 coupled thereto, the base of the actuable element including a port in comprised of a magnetic material as set forth in col. 4, lines 8-31, and fig. 1.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-69 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 6,044,056 to Wilde et al. in view of the remark.

Regarding to claim 3, Wilde discloses the claimed invention except for the magnetic material is comprised of at least one of a permanent magnetic material and a soft magnetic material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a magnetic material comprising of at least one of a permanent magnetic material and a soft magnetic material since it was known in the art that a magnetic material comprising of at least one of a permanent magnetic material and a soft magnetic material.

Regarding to claim 4, Wilde discloses the claimed invention except for the magnetic material is comprised of at least one of ferrites, remalloy, vicalloy, AlNiCo, Co,

CoPt, a rare earth metal, NiFe, CoFe, CoZr, FeN, AlSiFe, NiFeMo, NiFeCuCr, NiFeCo, CoFeB, CoFeV, CoFeCr, CoZrTa, FeAlN, FeTaN, and combinations thereof.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form magnetic material comprised of at least one of ferrites, remalloy, vicalloy, AlNiCo, Co, CoPt, a rare earth metal, NiFe, CoFe, CoZr, FeN, AlSiFe, NiFeMo, NiFeCuCr, NiFeCo, CoFeB, CoFeV, CoFeCr, CoZrTa, FeAlN, FeTaN, and combinations thereof, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claim 5 is rejected under the same rationale set forth above to claim 3.

Claim 6 is rejected under the same rationale set forth above to claim 3.

Claim 7 is rejected under the same rationale set forth above to claim 6.

Claim 8 is rejected under the same rationale set forth above to claim 7.

Claim 9 is rejected under the same rationale set forth above to claim 7.

Claim 10 is rejected under the same rationale set forth above to claim 7.

Claim 11 is rejected under the same rationale set forth above to claim 7.

Claim 12 is rejected under the same rationale set forth above to claim 7.

Claim 13 is rejected under the same rationale set forth above to claim 7.

Claim 14 is rejected under the same rationale set forth above to claim 7.

Claim 15 is rejected under the same rationale set forth above to claim 7.

Claim 16 is rejected under the same rationale set forth above to claim 14.

Claim 17 is rejected under the same rationale set forth above to claim 7.

Claim 18 is rejected under the same rationale set forth above to claim 14.

Claim 19 is rejected under the same rationale set forth above to claim 14.

Claim 20 is rejected under the same rationale set forth above to claim 14.

Claim 21 is rejected under the same rationale set forth above to claim 20.

Claim 22 is rejected under the same rationale set forth above to claim 20.

Claim 23 is rejected under the same rationale set forth above to claim 14.

Claim 24 is rejected under the same rationale set forth above to claim 14.

Claim 25 is rejected under the same rationale set forth above to claim 1.

Claim 26 is rejected under the same rationale set forth above to claim 1.

Claim 27 is rejected under the same rationale set forth above to claim 26.

Claim 28 is rejected under the same rationale set forth above to claim 1.

Claim 29 is rejected under the same rationale set forth above to claim 28.

Claim 30 is rejected under the same rationale set forth above to claim 28.

Claim 31 is rejected under the same rationale set forth above to claim 1.

Claim 32 is rejected under the same rationale set forth above to claim 31.

Claim 33 is rejected under the same rationale set forth above to claim 32.

Claim 34 is rejected under the same rationale set forth above to claim 31.

Claim 35 is rejected under the same rationale set forth above to claim 34.

Claim 36 is rejected under the same rationale set forth above to claim 34.
Claim 37 is rejected under the same rationale set forth above to claim 36.
Claim 38 is rejected under the same rationale set forth above to claim 36.
Claim 39 is rejected under the same rationale set forth above to claim 38.
Claim 40 is rejected under the same rationale set forth above to claim 31.
Claim 41 is rejected under the same rationale set forth above to claim 31.
Claim 42 is rejected under the same rationale set forth above to claim 31.
Claim 43 is rejected under the same rationale set forth above to claim 42.
Claim 44 is rejected under the same rationale set forth above to claim 43.
Claim 45 is rejected under the same rationale set forth above to claim 1.
Claim 46 is rejected under the same rationale set forth above to claim 1.
Claim 47 is rejected under the same rationale set forth above to claim 46.
Claim 48 is rejected under the same rationale set forth above to claim 46.
Claim 49 is rejected under the same rationale set forth above to claim 46.

Regarding to claim 50, Wilde discloses a substrate 810, an actuatable element 160 to displace the actuatable element along a path. Wilde does not disclose at least one cantilever coupled to the actuatable element at one end and the substrate at another end to control displacement of the actuatable element along the path. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form at least one cantilever coupled to the actuatable element at one end and the substrate at another end to

control displacement of the actuable element along the path since it was known in the art that at least one cantilever coupled to the actuable element at one end and the substrate at another end to control displacement of the actuable element along the path.

Claim 51 is rejected under the same rationale set forth above to claim 50.

Claim 52 is rejected under the same rationale set forth above to claim 50.

Claim 53 is rejected under the same rationale set forth above to claim 52.

Claim 54 is rejected under the same rationale set forth above to claim 52.

Claim 55 is rejected under the same rationale set forth above to claim 54.

Claim 56 is rejected under the same rationale set forth above to claim 50.

Claim 57 is rejected under the same rationale set forth above to claim 56.

Claim 58 is rejected under the same rationale set forth above to claim 50.

Claim 59 is rejected under the same rationale set forth above to claim 50.

Claim 60 is rejected under the same rationale set forth above to claim 50.

Claim 61 is rejected under the same rationale set forth above to claim 60.

Claim 62 is rejected under the same rationale set forth above to claim 50.

Claim 63 is rejected under the same rationale set forth above to claim 50.

Allowable Subject Matter

Claims 64-69 allowed.


The following is a statement of reasons for the indication of allowable subject matter:

None of the references of record teaches or suggests the claimed a MEMS device comprising a second actuatable elements, a second MEMS actuator for selectively applying a second force to the second actuatable element to displace the second actuatable element along a second path, a second cantilever coupled to the second actuatable element for controlling the displacement of the second actuatable element along the second path, and an electromagnetic MEMS actuator comprising an electrically conductive coil.

Conclusion

Any inquiry concerning this communication on earlier communications from the examiner should be directed to Mai-Huong Tran, (703) 305-1958. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM. The examiner's supervisor, David Nelms can be reached on (703) 308-4910.

The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Mai-Huong Tran


HOAI HO
PRIMARY EXAMINER